



December 9, 2009

Attn.: Lawrence J. Dusak
Energy And Environment Cabinet
Department For Environmental Protection
Division Of Water
200 Fair Oaks Lane
Frankfort, Kentucky 40601

RE: Premier Elkhorn Coal Company
Permit No. 867-5294 Am. #1 KPDES Permit Application
Notice of Deficiency Response

Dear Mr. Dusak:

Please find attached the required information for the above referenced KPDES application. The proposed operation is located on the Jenkins East 7.5' Quadrangle near the community of Burdine in Letcher County. The applicant is proposing to expand an existing underground mining operation that will add acreage to currently affected watersheds.

The watershed for which this application is expanding, currently contains disturbances associated with an existing activities associated with permit 867-5294. Two new sediment structures are proposed to be utilized under this amendment.

Please find attached the updated SDAA and NOI forms as requested. A full sized USGS quadrangle map has been provided showing the existing and proposed portions of the permit area. The MRP and ERI map have also been attached. No effluent characteristics were analyzed due to the fact that all structures are on-bench with no discharges occurring into the Joes Branch Watershed. Contact information has been provided in the NOI form itself for primary company contact and company officer(both being Stacy Billiter) and the NOI preparer.

Refer to the attached maps for locations of the proposed disturbance areas.

If additional information is required or if any questions arise to the enclosed information please contact me at our Pikeville office (606) 437-6223.

Sincerely,

Brent Hoselton

Brent Hoselton
Project Manager



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov
October 27, 2009

LEONARD K. PETERS
SECRETARY

Mr. Robert Zik, Vice President
Premier Elkhorn Coal Company
PO Box 130
Myra, KY 41549

Re: **Joe's Branch; Letcher County**
KPDES# **KYG046222**
DNR# **867-5294; Am #1**
AI# **85370**

Dear Mr. Zik:

The Division of Water has re-examined your Notice of Intent (NOI-CM) to extend coverage under your previously approved KPDES - "General Permit for Coal Mining" at the above referenced site. The NOI information provided was from June 27, 2007 and is not submitted on the current required forms. The proposed amendment will create 17 acres of new surface disturbance, add two more sediment structures, and drain directly into Joe's Branch rather than the previously permitted unnamed tributary.

The Division of Water has determined this NOI to be deficient for approval for extending the present general permit. However, this amendment can qualify for its own general permit with the submission of additional information. The following item(s) require your attention before the Division of Water can finalize this review:

- Applicant shall provide all information on the currently required NOI-CM form and submit a "Socioeconomic Demonstration and Alternatives Analysis" (SDAA) form. The SDAA is a detailed summary of which alternative water handling options were considered and how the local community will benefit from the resulting mining choice. It is required for Public Notice of your permit. A link to these forms is provided below.
- Applicant shall complete Section II - "General Site Information" by providing a full-sized 7.5 minute USGS Quadrangle location map; the Mining and Reclamation Map; and the Environmental Resources Information Map.
- Applicant shall complete Section VI - "Effluent Characteristics". The list of pollutant parameters on the Effluent Characteristics form (see the link provided below) must be analyzed for each sediment structure outflow or a waiver to sample one characteristic outflow must be justified.
- Applicant shall provide email addresses and phone numbers for the primary Company contact, the Company Officer/Signatory, and the preparer of the application. DOW must be notified whenever these individuals change or any contact information changes.

October 27, 2009
Premier Elkhorn Coal Company
#KYG046222
Page 2 of 2

Please address these deficiencies and submit to the Surface Water Permits Branch of the Division of Water within thirty (30) days of the date of this letter. Failure to comply with this timeframe may result in termination of your application.

For your convenience the necessary forms can be obtained at http://www.water.ky.gov/homepage_repository/kpdes_permit_aps.htm.

If you have any questions regarding the Division's decision, please contact me at (502) 564-8158, extension 4895, or by e-mail at larry.dusak@ky.gov.

Sincerely,

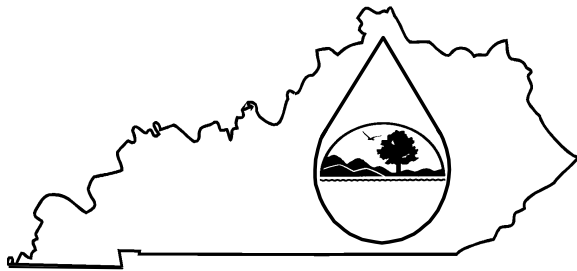


Lawrence J. Dusak
Operational Permits Section
Surface Water Permits Branch
Division of Water

LJS:ljd

c: Stacy Billiter- Premier Elkhorn Coal Company
Todd Williams- Alpine Consulting and Engineering
Tempo

FORM NOI-CM



KENTUCKY POLLUTION DISCHARGE ELIMINATION SYSTEM (KPDES)

Permit Application for General Permit Coverage For Coal Mining Operations

This is an application for:

- ☐ New mining operation coverage.
☒ Modification of coverage for additional area in same watershed.
☐ Modification of coverage for additional area in different watershed.
☐ Previously covered by an individual permit.

In order to qualify for coverage under the *Coal General Permit*, the coal mining operation must have obtained or is obtaining a Surface Mining Control and Reclamation Act (SMCRA) permit.

For additional information contact:
Surface Water Permits Branch (502) 564-3410

If Modification is checked, state reason for Modification: Addition of Pond (Outfall) Nos. 3 and 4

For Agency Use	Permit No. (Leave Blank)	K	Y	G	O	4				
For Agency Use	AI ID (Leave Blank)									

SECTION I – PERMITTEE INFORMATION

Applicant Name:	Premier Elkhorn Coal Company		
Mailing Address:	P.O. Box 130		City, State, Zip Code Myra, KY 41549
Contact Name:	Stacy Billiter	Title:	Engineer
Contact Name:	Stacy Billiter	Telephone Number:	606-639-0933
		E-mail Address:	sgbilliter@tecoenergy.com

SECTION II – GENERAL SITE INFORMATION

Attach an Adobe Acrobat PDF file of the full color USGS 7½-minute quadrangle map with the facility site clearly marked.			
Attach Adobe Acrobat PDF files of the Mining and Reclamation Plan map and the Environmental Resources Information map.			
For Amendments or Modifications attach a Adobe Acrobat PDF file showing only the amended or modified areas.			
SMCRA Permit Number:	867-5294 Am1	Type of Operation:	Underground
County where facility is located:	Letcher	Nearest community:	Burdine
Nearest public road intersection:	Joes Branch County Rd & US 23	Nearest named stream:	Joes Branch
Latitude (decimal degrees):	37.198889	Longitude (decimal degrees):	82.615278
		Method used (see instructions):	topo
Surface acreage:	Current: 14.50	Amended: 17.80	Underground acreage: Current: 560.00
			Amended: 560.00

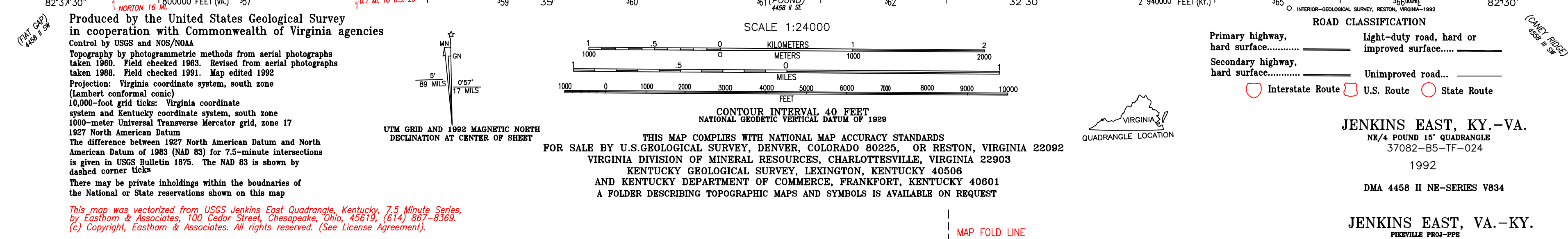
SECTION III – SPECIFIC SITE INFORMATION

Number of sediment structures proposed:	2	(complete sediment structure inventory table on page 3)
Number of fills proposed:	0	(complete fill inventory table on page 4)
Number of stream crossings proposed:	0	(complete stream crossings inventory table on page 4)
Nearest downstream public water supply:	Harless Creek, KY (Mountain Water District) Distance in stream miles: 30.6	

SECTION IV – COE CWA SECTION 404 PERMIT INFORMATION

Has a Clean Water Act Section 404 permit been obtained from the Army Corps of Engineers for any or all sediment structures, fills or stream crossings? N/A	
Permit Number:	N/A
Permit Issuance Date:	
Activities covered by permit:	

JENKINS EAST QUADRANGLE
KENTUCKY-VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 POUND 15' QUADRANGLE



License Agreement:
Eastham & Associates hereby agrees to grant the purchaser a non-exclusive license to use the enclosed drawing and digital data subject to the following terms and conditions:

35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

SCALE 1:24400

1 0 1 2
1000 0 1000 2000
KILOMETERS
METERS

1 0 1 2
1000 0 1000 2000
MILES


1000 0 1000 2000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S.GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA
VIRGINIA DIVISION OF MINERAL RESOURCES, CHARLOTTESVILLE, VIRGINIA 22903
KENTUCKY GEOLOGICAL SURVEY, LEXINGTON, KENTUCKY 40506
AND KENTUCKY DEPARTMENT OF COMMERCE, FRANKFORT, KENTUCKY 40601
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

(7) _____ 82-30 _____
 700 _____ Spdm: _____
 INTERIOR- GEOLOGICAL SURVEY, RESTON, VIRGINIA 20192
 ROAD CLASSIFICATION
 Primary highway, _____ Light-duty road, hard or
 hard surface..... _____ improved surface..... _____
 Secondary highway, _____
 hard surface..... _____ Unimproved road... _____
☐ Interstate Route ☐ U.S. Route ☐ State Route
 JENKINS EAST, KY. -VA.
 NB/4 POUND 15' QUADRANGLE
 37082-B5-TF-024
 1992
 DMA 4458 II NE-SERIES V834
 JENKINS EAST, VA. -KY.
 PEKIVILLE PROJ-PFR

FORM NOI-CM

SECTION V – OTHER ENVIRONMENTAL APPROVALS AND PERMIT INFORMATION			
CATEGORY	EXISTING PERMIT WITH NUMBER	PERMIT NEEDED WITH PLANNED APPLICATION DATE	
401 Water Quality Certification	N/A		
Drinking Water	N/A		
Wastewater Construction	N/A		
Water Withdrawal	N/A		
Air Emissions	N/A		
Solid or Special Wastes	N/A		
Hazardous Waste Registration /Permit	N/A		
SECTION VI – EFFLUENT CHARACTERISTICS			
Samples and analysis for the pollutants or pollutant characteristics listed on the Effluent Characteristics Data Sheet (page 5) shall be performed for each, sediment control structure, either existing or proposed, within each watershed. All samples and analysis are to be taken and performed in accordance with the requirements of 40 CFR Part 136. Complete an Effluent Characteristics Data Sheet for each sample collected and analyzed.			
SECTION VII – BEST MANAGEMENT PRACTICES (BMP) PLAN			
Check one the following boxes.			
<input checked="" type="checkbox"/> The generic Coal BMP Plan shall be completed and implemented for this activity within 90 days of the granting of coverage under the KPDES Coal General Permit. <input type="checkbox"/> A site specific BMP shall be developed, and implemented for this activity within 90 days of the granting of coverage under the KPDES Coal General Permit. (A copy of the BMP shall be submitted to the DOW for review and comment prior to implementation.) <input type="checkbox"/> The Oil & Grease requirements of the KPDES Coal General Permit shall be followed.			
SECTION VIII – CERTIFICATION			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
NAME AND OFFICIAL TITLE (Type or Print)	Robert J. Zik, Vice-President	Telephone Number: (Area Code and Number)	(606) 523-4444
SIGNATURE:		DATE:	12/3/09
SECTION IX – NOI PREPARER INFORMATION			
Preparer Name:	Mark C. Spears		
Company Name	Alpine Consulting & Engineering, Inc.		
Mailing Address:	P.O. Box 3203		
City, State, Zip Code:	Pikeville, KY 41502		
Phone Number:	Work # (606) 437- 6223 e-mail Address: mspears@alpine-eng.com		

This completed application form and attachments should be sent to: Surface Water Permits Branch, Division of Water, 200 Fair Oaks Lane, Frankfort, Kentucky 40601. Questions should be directed to: Surface Water Permits Branch, Operational Permits Section at (502) 564-3410.

FORM NOI-CM

Sediment Structure Inventory

[illegible]

Instructions

LIST ONLY NEW OR PREVIOUSLY UNPERMITTED STRUCTURES

ID Number:	Provide the structure's identification number.
Upland/In stream:	Indicate whether the structure is on the bench, in-stream or upland.
Permanent/Temporary:	Indicate whether the structure is permanent or temporary
Drainage Area:	Provide the contributing drainage area in acres.
Activities:	List the types of activities within the contributing drainage area, i.e; fills, haul roads, surface mines, underground mines, etc.
Latitude:	Provide the latitude of the structure.
Longitude:	Provide the longitude of the structure.
Receiving Stream:	Name of the water body, which receives the structure's discharges.

(Attach additional pages if necessary)

FORM NOI-CM

Fill Inventory

ID Number	Permanent/Temporary	Fill Size (acres)	Watershed Size (acres)	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Impacted Stream (name)
N/A						

Instructions

ID Number: Provide the structure's identification number.
Permanent/Temporary: Indicate whether the fill is permanent or temporary
Size: Provide the size of the fill in acres.
Watershed: Provide the watershed size in acres above the lowest point of the permanent fill.
Latitude: Provide the latitude of the fill.
Longitude: Provide the longitude of the fill.
Impacted Stream: Name of the water body in which the fill is being placed

(Attach additional pages if necessary)

Stream Crossings Inventory – N/A

ID Number	Permanent/Temporary	Stream Crossing Type	Watershed Size (acres)	Latitude (dd-mm-ss)	Longitude (dd-mm-ss)	Impacted Stream (name)
N/A						

Instructions

ID Number: Provide the stream crossing's identification number.
Permanent/Temporary: Indicate whether the stream crossing is permanent or temporary
Type: Provide the type of crossing, i.e. bridge, culvert, low water, etc.
Watershed: Provide the watershed size in acres above the stream crossing.
Latitude: Provide the latitude of the stream crossing.
Longitude: Provide the longitude of the stream crossing.
Impacted Stream: Name of the water body in which the stream crossing is being placed

(Attach additional pages if necessary)

FORM NOI-CM

Effluent Characteristics Data Sheet

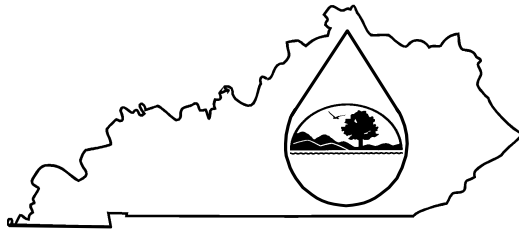
Outfall No.	Latitude:		Longitude:		Receiving Water:	
Pollutant or Pollutant Characteristic	Value	Units	Sample Type	Analytical Method Used	Method Detection Level	
Total Suspended Solids						
Flow						
pH						
Hardness (as mg/l CaCO ₃)						
Sulfate (as SO ₄)						
Total Recoverable Aluminum						
Total Recoverable Iron						
Total Recoverable Manganese						
Total Recoverable Antimony						
Total Recoverable Arsenic						
Total Recoverable Beryllium						
Total Recoverable Cadmium						
Total Recoverable Chromium						
Total Recoverable Copper						
Total Recoverable Lead						
Total Recoverable Mercury						
Total Recoverable Nickel						
Total Recoverable Selenium						
Total Recoverable Silver						
Total Recoverable Thallium						
Total Recoverable Zinc						
Free Cyanide						
Total Phenols						
Conductivity						

Instructions

Outfall Number: Provide the outfall number. (use following naming convention -KYG04XXXX-XXX)
 Latitude: Provide the latitude of the discharge point or sample point.
 Longitude: Provide the longitude of the discharge point or sample point.
 Receiving Water: Provide the name of the receiving water discharged to or sampled
 Where sample was collected: Check either sediment structure or in-stream
 Value: Report the numerical results of the analysis for the pollutant or pollutant characteristic
 Units: Indicate the units, i.e. mg/l, MGD, standard units, °F, etc.
 Sample Type: Indicate how the sample was collected, i.e. grab, composite, weir, instantaneous, etc.
 Analytical Method: Indicate the EPA test method used for analysis of the pollutant or pollutant characteristic
 Method Detection Level: Indicate the MDL for the EPA test method used.

(Attach additional pages if necessary)

KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Project Information

Facility Name: Joes Branch Underground Mine (DMRE Permit #867-5294 Amendment No. 1)

Location: .10 Mile SE of Jct. Joes Branch Road & US Route 23

County: Letcher

Receiving Waters Impacted: Joes Branch

II. Socioeconomic Demonstration

1. Define the boundaries of the affected community:

(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

The proposed amendment area will be located on Joes Branch of Beefhide Creek near the community of Burdine in Letcher County. The proposed receiving stream channels will be Joes Branch of Beefhide Creek. This stream is a tributary of Beefhide Creek of the Big Sandy River. The proposed project area is approximately 0.1 miles Southeast of Joes Branch Road & US Route 23 at latitude of 37° 11' 56" and longitude of 82° 36' 55". The surface/underground disturbance associated with the amendment area is located on the Jenkins East USGS 7½ minute quadrangle maps.

2. The effect on employment in the affected community:

(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

Based upon estimates of the USDA-Economic Research Service, the unemployment rate for Letcher County in 2008 was 6.9% compared to 6.4% statewide and 5.8% nationally.

The cumulative economic impact of the proposed project will be to contribute to the overall present economy in Letcher County. Not only will the proposed project directly contribute to the mining industry, but will contribute to other sectors closely related to the mining industry. These sectors will include trucking companies, mine supply companies, equipment sales companies, fuel sales companies, engineering firms, and other sectors that depend upon the mining industry as a part of their accounts receivable base. Letcher County heavily relies on the coal industry as a part of its viable economy, as do most counties in the region. Letcher County mining accounted for 11.5% of all employment in FY 2004 and accounted for 21.5% of total county wages (KY Coal Facts). As old mining operations close, new operations must be opened and existing operations expanded in order for the local economy to sustain its current level. History has shown that a 'slow down' in the coal industry directly impacts differing business sectors within the region.

While retail and services employed the greatest percentages of workers in Letcher County in 2004, the mining, public

administration, and information sectors provided the highest average weekly wage (U.S. Department of Labor, Bureau of Labor Statistics). The mining industry paid an average weekly wage of \$748.02. It is estimated that the proposed underground mining operation will pay out an annual payroll of approximately \$777,941 to approximately 20 employees. Additionally, the proposed mining project would support employment for sectors that provide a service to the mining industry, i.e. material sells equipment sells/rentals, etc. The money paid out would be circulated throughout the community and help create a local healthy economy. The total number of American jobs created both directly and indirectly by the domestic mining industry was more than 3 times the number of workers directly involved in mining (KY Coal Facts). Thus, approximately 60 people would be indirectly impacted by the proposed surface mining operation, in addition to the 20 persons/families directly related.

The proposed amendment to the underground mining operation will add a storage area for underground development waste that will reduce the need to transport mine waste off-site and continue/increase employment for persons currently working at the site or for persons currently working at other mining facilities that are nearing completion, and perhaps will become unemployed if new job opportunities are not presented. The jobs created by the proposed operation will be permanent during the life of the operation. Additionally, the proposed operation may possibly create jobs indirectly related to the operation as additional mining operations create demands for operational supplies. Thus, the 20 employees needed to conduct the proposed mining operation will be able to continue working within the mining industry.

The 2000 census results showed that Letcher County had a total population of 25,277 and had a population of 23,702 in 2008, a decrease of 6.2%. The decrease in population may result from relocations due to unavailable employment. 26.6 percent of Letcher County residents lived below the poverty range in 2008. The median household income for residents residing in Letcher County in FY 2008 was \$29,415. The proposed mining operation will aid in raising the average annual household income and will help increase job opportunities in the region.

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:

(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

The median household income level for Letcher County in 2008 was \$29,415 (USDA-Economic Research Service). Jobs continued by the proposed project would produce an average annual income per employee of approximately \$38,897, which is 32% more than the county median household income. Continuation of employment for the proposed operation would positively impact approximately 20 households directly within the surrounding community and approximately 60 households indirectly. The market value of surrounding taxable property would increase over time with continued quality paying employment, such as offered by the proposed project. Additionally, the continued employment would aid with educational opportunities, better health care, and the provision of everyday basic necessity needs (ie. food, shelter, and clothing).

The annual income paid to miners for the proposed project would increase the purchasing power of Letcher County by \$777,941 annually and the effects would trickle to other related and unrelated industries throughout the community.

4. The effect on tax revenues of the affected community:

(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

The mining industry contributes to the local tax base through taxes on real and personal property, which in turn funds public services. During active stages of a mining operation, the property is assessed at a higher value when real property taxes are determined. Prior to mining activities or post mining activities, the idle property has a much lower value and property taxes paid do not contribute as much to the local economy. Personal property taxes are levied on the equipment utilized during a mining operation. A underground mining operation requires the purchase and use of numerous, very expensive, pieces of equipment during the life of the operation. The purchase of mining equipment drives the industry's sizable contribution to the personal property tax base because new equipment is expensive and depreciates rapidly. Property tax payments will be received from the operator during the life of the project, otherwise if not permitted, property tax payments received by Letcher County would be a lesser amount. The state severance tax is a gross receipt tax levied on businesses that sever, extract, and/or produce natural resource products, including coal, in Kentucky. The goal of the severance tax is to provide producing counties with funds to develop alternative industries to sustain the communities in the future once this natural resource is exhausted. The proposed operation will generate approximately \$1,449,000 (based on a minimum of \$0.50/ton with approximately 2,890,000 tons of recoverable reserve). Although a majority of the tax revenue is directed to the state, a large portion will directly benefit Letcher County. During FY 2005 coal taxes were received by Letcher County totaled \$1,591,956 (KY Coal Facts).

II. Socioeconomic Demonstration- continued

5. The effect on an existing environmental or public health in affected community:

(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

The proposed underground mining operation will be performed in accordance with all state and federal regulations governing the coal mining industry to ensure environmental and public health. The proposed area has been previously logged. The previous disturbances were performed without sediment control in-place, thus, excessive sediment was allowed to enter the receiving stream channel. The proposed amendment will provide sediment control via sediment control ponds that will be located on-bench from the proposed disturbance area. All discharges that will be created by proposed mine waste storage area and haul road will pass through a sediment structure. The proposed sediment control ponds will capture sediment runoff from the proposed surface disturbance areas as well as from the previously disturbed areas. The sediment control structure will allow the receiving stream to recover from previous sedimentation and prior to removal of said sediment control ponds all disturbed areas, previous and proposed, will be revegetated. This will create a better habitat for aquatic organisms within the receiving stream channel.

6. Discuss any other economic or social benefit to the affected community:

(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

Due to the economic impact of the coal industry throughout Kentucky in 2004, in addition to 15,012 persons working at the mines, 6,021 persons worked in factories making everything from mining equipment to home appliances; 2,617 persons drove coal trucks and cargo trucks, worked at rail yards, etc.; 12,704 persons worked in warehouses, sold clothing, appliances, furniture, in retail stores, etc.; 12,470 persons worked in banks, law offices, engineering firms, accounting firms, and other service businesses; 4,366 persons built homes, offices, factories, and highways; and 7,968 others were teachers, government officials, and a wide variety of other professions and occupations. (KY Coal Facts)

The mining industry accounted for 944 jobs directly related to mining in 2004 in Letcher County and made up 11.5% of the total labor force. Wages paid out to miners in Letcher County in 2004 totaled \$36,718,975, comprising 21.5% of the county's total wages with an average weekly salary of \$748.02.

III. Alternative Analysis

1. Pollution prevention measures:

(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

The applicant is proposing an amendment to a coal removal operation and will remove the coal reserves by utilizing underground mining methods. An alternative to this removal method would be that of surface mining. Coal removal by surface mining methods of the proposed reserves is impractical, due to the large area and the massive spoil removal that would be involved. Large spoil storage structures would be necessary and would affect a much more substantial reach of stream channel by filling it in with spoil material. In some places, the coal reserve is 500' below the surface. The cost and environmental damage caused by performing an area mining operation would far outweigh any benefits.

The main pollution prevention measure implemented for the proposed project will be the construction of the proposed sedimentation ponds. The sedimentation ponds will prevent excessive sediment from reaching the receiving stream, as runoff from the surface disturbance areas will be directed through the sedimentation ponds upon which the sediment will 'settle-out' prior to the water discharging from the structure. Other pollution prevention measures for the proposed project would include the construction of on-site diversions to convey water around disturbed areas, preventing runoff from undisturbed areas from entering disturbed areas and to prevent runoff from disturbed areas from entering undisturbed areas prior to entering sediment control structure(s).

2. The use of best management practices to minimize impacts:

(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

During the lifetime of the proposed underground mining activity, the operator will implement best management practices that will aid in the avoidance of possible impacts on aquatic resources. Best management practices considered and will be implemented in appropriate situations include, but are not limited to, any of the following, singly or in combination: basins, diversion ditches, filter strips, land grading & reshaping, mulching, placement of rip-rap, rapid revegetation (especially along stream banks), rock check dams, silt fences, straw bale barriers, stream bank stabilization, sumps, and work in periods of no or low flow or dry weather.

The main best management practice to be implemented will be the construction of the proposed sediment ponds. The sediment ponds will capture runoff from surface disturbance areas and remove sediment fines prior to the water being discharged to the local stream channel. The sediment ponds have been designed and will be constructed to handle a 25 year/24 hour precipitation event and will be placed away from any steep topography or buffer zones. During construction of the sediment ponds, alternative sediment control devices (ie. silt fences and straw bale dikes) will be utilized to prevent excessive sediment from entering the local stream channel. All sediment structures will be inspected following significant rainfall events and at minimum quarterly inspections will be performed by qualified personnel.

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:

(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

The proposed amendment will add an additional two (2) discharge locations (sedimentation ponds) that will discharge into Joes Branch of Beefhide Creek. The proposed discharge points will control runoff from approximately 3.3 surface disturbance acres via sedimentation ponds and assuming that the ponds maintain a full volume of water, the total volume of water available for recycling uses each month would be approximately 97,770 gallons (based on proposed pond capacities). Approximately 20,000 gallons of stored water each month (during the months of June, July, and August each year) could be reused as a dust suppressant for road facilities. Re-distribution of the water to the surrounding surface areas would be difficult, as the surrounding slopes average 27° and runoff would create additional potential environmental damage.

An additional on-site reuse of waters to be evaluated is that of utilizing the water during reclamation operations. As proposed, the proposed amendment area would require a total of 3.3 acres of reclamation/revegetation. Water utilized within hydroseeders during reclamation would provide a need of approximately 8,250 gallons of water (one truck-load of 2500 gallons per acre), thus the total amount utilized would not eliminate the discharges generated during the mining operation. No other water is needed for recycling or reuse with this operation.

In order to recycle the additional amount of generated wastewater to potable drinking water, the discharge would have to be transferred to the Mountain Water District Drinking Water Treatment Facility located approximately 30.6 miles northeast of the proposed discharge location on Harless Creek in Pike County. Thus, the cost associated with the transfer of the discharges to the treatment facility would be \$10,825,056 (161,568 feet of 24" diameter HDPE pipe at \$67.00/linear foot) to run a 24" diameter HDPE pipe to the nearest treatment facility.

III. Alternative Analysis - continued

4. Application of water conservation methods:

(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

Re-using the captured storm water would conserve the stream. Thus, the water conservation procedure for the proposed mining operation will be to re-use the captured storm water for on-site dust control, hydroseeding operations, and where possible, irrigation operations. (The requirement for water conservation via irrigation methods is slope readings of no greater than 6%).

Mining activities are not normally water dependent operations; however, all captured water will be recycled/re-used to the fullest extent possible. The water stored in sediment ponds will be re-distributed to the local stream channel once the pond has reached full capacity (spillway elevation). Upon full capacity, the flow to the local stream channel will be the same as pre-mining conditions. Water losses would only result from evaporation and infiltration, which both losses would result in recycling as the evaporation contributes to rainfall and infiltration will feed back to the local stream channel.

5 Alternative or enhanced treatment technology:

(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

Several alternatives for treating water from the project area and discharging it to streams and rivers in the area have been evaluated. These alternatives include construction of a water treatment facility, construction of physical filter barriers, chemical treatment of drainage, and construction of wetlands.

Water Treatment Facility Construction of a small water treatment facility (500,000 gallons per day) on the project site would cost over \$1.6 million dollars, plus an additional cost of \$50,000 for a containment reservoir. Because of the high cost of construction and the short life of the proposed operation (ten years) the on-site water treatment facility would not be feasible.

Physical Filter Barriers Physical filter barriers such as silt fences and straw bales are designed for use with small discharges and would not be able to handle the large discharge flow generated nor would they meet requirements of the Commonwealth of Kentucky's Surface Mine Regulations as set forth in 405 KAR 16:070. However, physical filter barriers will be utilized to minimize impacts to local stream channels during construction and removal of the sediment ponds.

Chemical Treatment Chemical treatment of drainage was also considered. The primary treatment required at the proposed site is the removal of sediments, which would require the use of sediment ponds to hold the runoff water from surface disturbance areas while the sediment fines settle out. Chemicals may augment this process, but sediment removal is not possible using chemical treatment alone. It would not be cost efficient to chemically treat the entire column of discharge at the proposed site.

Wetland Construction Constructed wetlands have traditionally been used for biological treatment. The discharge to be generated by the proposed project is highly sediment laden. Wetlands could be a suitable mechanism for treatment of the conductivity; however, sediment ponds provide a similar function at a much less cost. Furthermore, the proposed project area is located at higher elevations, well above the valley bottoms. Thus, the constructed wetland area would have to be in the valley bottom and this would create additional impacts to the upper reaches of the local stream channels.

III. Alternative Analysis - continued

6. Improved operation and maintenance of existing treatment systems:

(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

The storm water runoff from the proposed surface disturbance areas will be captured in sediment pond structures prior to discharge to local stream channel(s). This will allow settling out of excessive sediment fines so that lowering of water quality will be minimized based on applicable regulations concerning discharges from the proposed project site. In order for larger sediment ponds to be constructed that would further increase the settling time of sediments, the proposed sediment ponds would have to be moved from their on-bench locations and located further downstream within the valley bottom. This would increase surface disturbance and directly impact the local stream channel, as the sediment ponds would be constructed within the stream channel. The environmental impact would be greater with this scenario.

In order to recycle the additional amount of generated wastewater to potable drinking water, the discharge would have to be transferred to the Mountain Water District Drinking Water Treatment Facility located approximately 30.6 miles northeast of the proposed discharge location on Harless Creek in Pike County. Thus, the cost associated with the transfer of the discharges to the treatment facility would be \$10,825,056 (161,568 feet of 24" diameter HDPE pipe at \$67.00/linear foot) to run a 24" diameter HDPE pipe to the nearest treatment facility.

7. Seasonal or controlled discharge options:

(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

The proposed sediment control structure has been designed to control a 25 year/24 hour storm event. This means that the pond was designed and will be constructed to handle a rainfall event within a 24 hour period of the intensity such as only normally occurring once within a 25 year period. Thus, once the proposed ponds are filled with water the receiving stream flow will be that of pre-mining conditions. The pond will fill to the spillway elevation and will flow through the spillway and will maintain a hydrologic controlled release in accordance with normal stream flow rates. During high flow conditions the pond will release water at such a rate that normal stream flow conditions are maintained. Additionally, during low flow conditions the pond will retain water that will in-turn maintain normal stream flow conditions.

The capacity of the physical, chemical and biological processes to assimilate is interconnected and based on the features of the streamscape (the stream, flood plain and riparian zone). Even though the removal of natural features such as vegetative cover may compromise the abilities of stream assimilative processes, construction of the sediment ponds will mitigate the impacts. The sediment ponds will retard the velocity of the storm water runoff and enhance sediment filtering and reduce its deposition.

III. Alternative Analysis - continued

8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of proposed treatment system.)

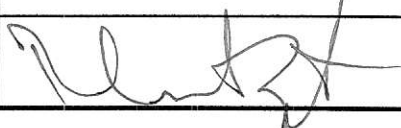
See AT-III

9 Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

See AT-III

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	Robert J. Zik, Vice-President	Telephone No.:	(606) 523-4444
Signature:		Date:	12/2/09

III. Alternative Analysis - continued

8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of proposed treatment system.)

The potential for on-site disposal of wastewater was investigated. The construction of injection wells on-site was investigated as an alternative to the proposed discharges. The injection wells would be approximately 8" in diameter and approximately 300' in depth and would hold a volume of water of approximately 785 gallons per well. Thus, approximately 125 wells would be needed to ensure no discharge will occur. The estimated costs associated with the wells would be approximately \$20/linear foot, thus, 125 wells at 300' in depth would cost approximately \$750,000.

No underground works were identified within the area to be suitable for injection of discharges.

9 Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

In order to recycle the additional amount of generated wastewater to potable drinking water, the discharge would have to be transferred to the Mountain Water District Drinking Water Treatment Facility located approximately 30.6 miles northeast of the proposed discharge location on Harless Creek in Pike County. Thus, the cost associated with the transfer of the discharges to the treatment facility would be \$10,825,056 (161,568 feet of 24" diameter HDPE pipe at \$67.00/linear foot) to run a 24" diameter HDPE pipe to the nearest treatment facility.

A possible alternative to piping water to the treatment facility would be the use of trucks to transport water. This alternative would pose additional costs of approximately \$500,000 (Two 70,000 gallon tanks + labor + pipe system) in the construction of a system of pipes and collection tanks to collect and hold the water prior to loading tanker trucks. There would also be transportation costs of approximately \$3.25 per mile (fuel and service). If the total amount of water collected per month were 97,770 gallons (based on proposed pond volumes), it would need 49 round trips per month using a 2000-gallon truck. Thus, 49 trips at a distance of 61.2 miles at \$3.25/mile generates a cost of \$9,746/per month, \$1,169,532 total over the life of the project, plus the initial \$50,000 investment, plus the approximately \$100,000 cost to remove the system once the project is complete, plus the initial \$70,000 investment for the tanker truck, plus the annual salary for the tanker truck driver. This alternative would also result in additional impacts to the environment in the form of a loss of about 97,770 gallons of water per month to the local watershed. This may constitute material damage to the hydrologic balance within and outside of the permit area. In addition, implementing this alternative would result in increased risks to public safety because it would necessitate repeated daily trips by large tanker trucks on small rural roads.